

ABSTRACT

The present invention relates to liposomes comprising novel peptide antigens which play a role in regulating 5 human immunity against hepatitis B virus, more specifically, to peptide groups corresponding to epitopes of antigens derived from X protein of HBV which induce cytotoxic T lymphocytes against the virus or immunological tolerance to the virus, and pH-sensitive liposomes 10 comprising said peptide groups to induce cellular immunity so that CTLs specific to the virus can be produced. Since peptide antigens derived from X protein such as X3, X4, X5, X6 and X7 activate CTL which can recognize HBV 15 antigens present in human body, and can also be recognized by the CTL, the said liposomes can be used for the development of proposed therapeutic agents for the prevention and treatment of HBV-associated diseases.

PCT/JP2007/052239